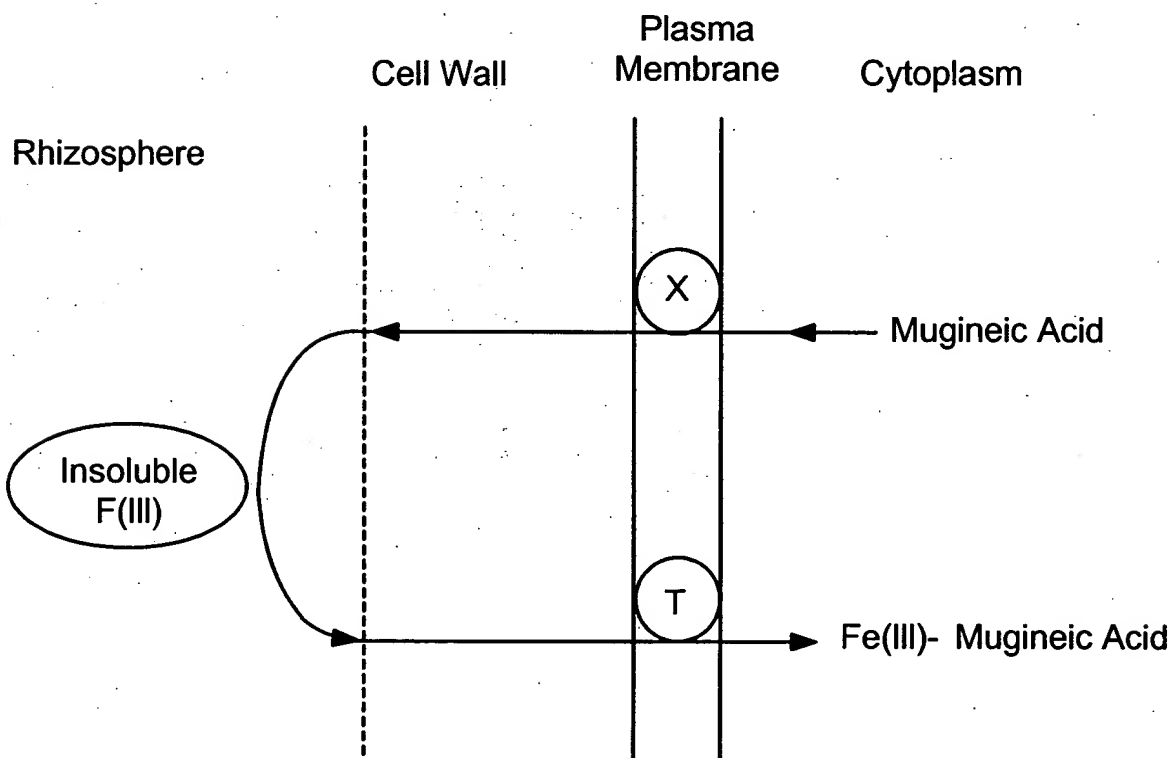


FIG. 1



Two Kinds of Fe-Uptake Mechanisms in Higher Plants

FIG. 2



Seq 37



	putative poly(A) signal	poly(A) site	putative poly(A) signal	poly(A) site	
541	TCCGTC	AAAAA	TCACCTTATTTATCCTTCTGTTTACAAAGATTATATGAA	CGAACTTTTATTTATGGAAGCGTCTACCATTTAATTTT	630
181	S V K K S L I Y P S V Y K D Y N E R T F Y L W K R L P F N F				210

2/19

	putative poly(A) signal	poly(A) site	putative poly(A) signal	poly(A) site	
531	ACAACTCGAGGCAAGGCTCTCGTCG	TAATTA	TTTTTGTATTTTGACTATATTATCTCTCAGTTTTTGGTCATAATATAACTTCCACAC		720
211	T T R G K G L V V L I F V I L T I L S L S F G H N I K L P H				240

FIG. 3



3/19

1 ATGGTTAGAACCCGTGTATTATTCTGGTTATTTATATCTTTTTTTGCTACGGTTCAATCG 60
61 AGTGCTAGACTTATTAGCACTTCATGTATTTCCCAAGCTGCGCTATACCAATTTGGATGT 120
121 TCTAGTAAATCTAAAAGTTGCTACTGTAAAAACATCAATTGGCTGGGTTCAGTGACAGCA 180
181 TGTGCCTATGAGAATTCCAAATCTAACAAAACACTAGACAGCGCCTTAATGAAGTTAGCA 240
241 TCCCAATGTTCAAGCATCAAAGTTTATACTTTAGAGGACATGAAGAATATTTATTTAAAT 300
301 GCGTCAAATTATTTGAGAGCACCTGAGAAAAGTGATAAAAAAACCGTGGTTAGTCAACCG 360
361 CTCATGGCGAACGAGACAGCGTATCATTATTATTATGAGGAAAATTATGGTATCCATCTT 420
421 AACCTAATGCGCTCTCAATGGTGGGGTTGGGGTGTGGTGTCTTGTGGGTGGGTGTGGTT 480
481 ACTGCAGCCACTATCTTGAACATTCTGAAAAGGGTGTTTGGTAAGAACATCATGGCAAAC 540
541 TCCGTCAAAAAATCACTTATTTATCCTTCTGTTTACAAAGATTATAATGAACGAACTTTT 600
601 TATTTATGGAAGCGTCTACCATTTAATTTTACAACTCGAGGCAAGGGTCTCGTCGTATTA 660
661 ATTTTTGTTATTTTGACTATATTATCTCTCAGTTTTGGTCATAATATTAACTTCCACAC 720
721 CCATATGATAGGCCCAGATGGAGAAGAAGTATGGCCTTTGTGAGTCGTAGAGCAGACTTG 780
781 ATGGCCATTGCACTTTTCCAGTAGTCTATCTATTCCGAATAAGAAATAATCCCTTCATC 840
841 CCTATAACAGGGCTTTCCTTTTCTACATTTAATTTCTATCATAAATGGTCTGCCTACGTT 900
901 TGTTTTCATGTTGGCCGTTGTACACTCAATTGTCATGACCGCCTCGGGAGTGAAAAGAGGT 960
961 GTGTTTCAAAGTCTGGTTAGGAAATTTTACTTTAGGTGGGGTATAGTGGCAACGATATTA 1020
1021 ATGTCTATTATTATTTTCCAAAGTGAAAAAGTATTTAGAAATAGAGGGTATGAGATATTC 1080
1081 CTTCTTATTTCATAAAGCGATGAATATTATGTTTATTATGTCATGTACTACCATTGTCAC 1140
1141 ACCTGGGCTGGATGGGTTGGATTGGTCAATGGCTGGTATTTTATGCTTTGATAGATTC 1200
1201 TGCAGGATTGTTAGAATAATCATGAATGGTGGCTTGAAAACCTGCTACTTTGAGTACCACT 1260
1261 GATGATTCTAATGTTATTAAAAATTTAGTAAAAAAACCAAAGTTTTTCAAGTACCAAGTA 1320
1321 GGAGCTTTCGCATACATGTATTTCTTATCACCAAAAAGTGCATGGTTCTATAGTTTCCAA 1380
1381 TCACATCCATTTACAGTATTATCGGAACGACACCGTGATCCAAACAATCCAGATCAATTG 1440
1441 ACGATGTACGTAAAGGCAAATAAAGGTATCACTCGAGTTTTGTTATCGAAAGTTCTAAGT 1500
1501 GCTCCAAATCATACTGTTGATTGTAAATATTCTTGAAGGCCCATATGGTGTAACGGTT 1560
1561 CCACATATCGCTAAGCTAAAAAGAAATCTGGTAGGTGTAGCCGTGGTTTGGGTGTTGCG 1620
1621 GCTATTTATCCGCACTTTGTGCAATGTTTACGGTTACCATCTACTGATCAACTTCAGCAT 1620
1681 AAATTTTACTGGATTGTTAATGACCTATCCCATTTGAAATGGTTTGAAATGAATTGCAA 1740
1741 TGGTTAAAGGAGAAAAGTTGTGAAGTCTCAGTCATATATACTGGTTCCAGTGTTGAGGAC 1800
1801 ACAAATTCAGATGAGAGTACAAAAGGTTTTGATGATAAAGAAGAAAGCGAAATCACTGTT 1860
1861 GAATGTCTCAATAAAAGACCTGATTTGAAAGAAGTGTGCGCTCGGAAATAAACTCTCA 1920
1921 GAACTAGAGAATAATAATATTACCTTTTATTCCTGCGGGCCAGCAACGTTTAAACGACGAT 1980
1981 TTTAGAAATGCAGTGGTCCAAGGTATAGACTCTTCCTTGAAGATTGACGTTGAACTAGAA 2040
2041 GAAGAAAGTTTTACATGGT 2059

FIG. 4

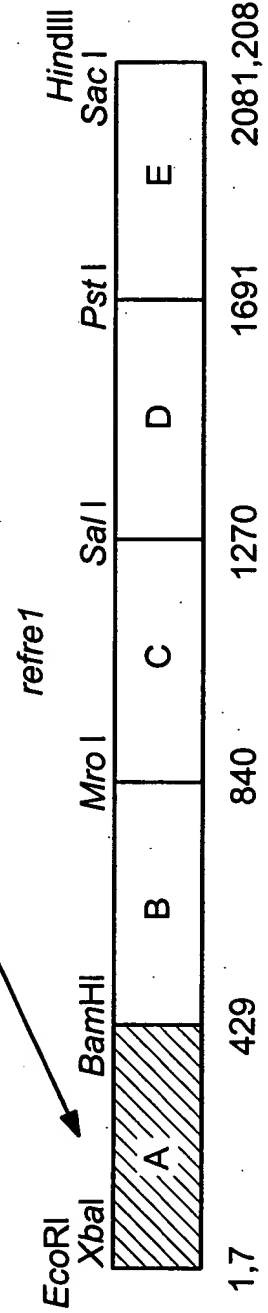
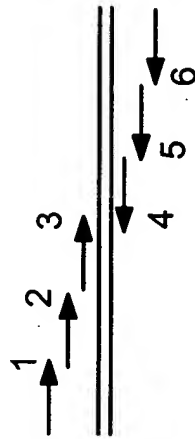
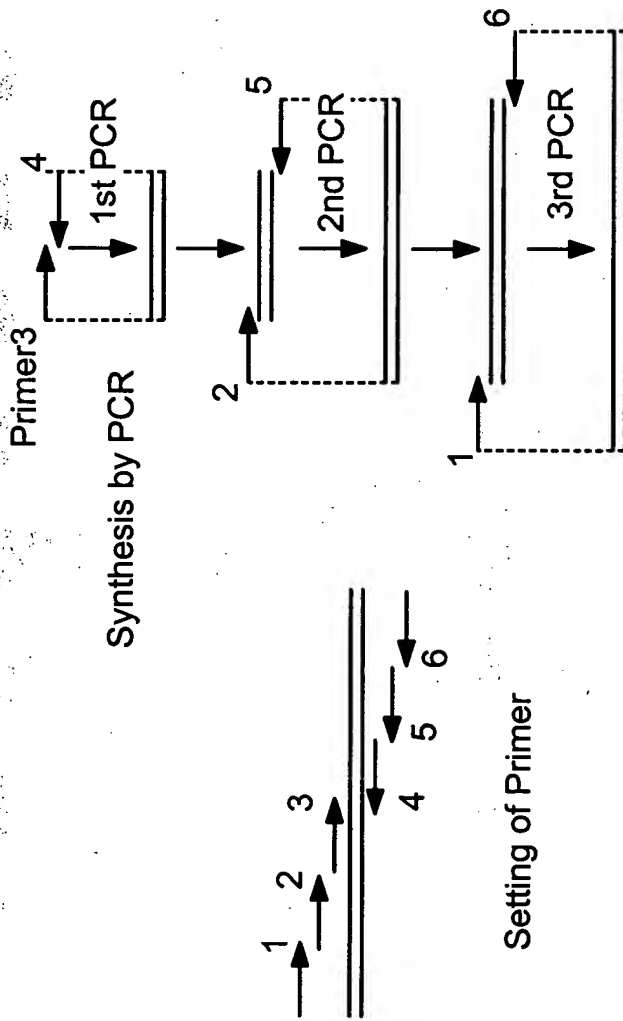


FIG. 5

FIG. 6A

FIG. 6B

FIG. 6

Sequence Name Base Sequence

	5'	3'	
A-1	GAATTCTCTAGACTCCACCATGGTTAGAACACGAGTCTCTTTTCTGCCTCTTTCATCTCTTTCTTCGGTACAGTCCCAATCGAGCG	83mer	
A-2	GTCCAATCGAGCGCTACACTCATCTCCACTTCATGCATTTCTCAGGCTGCACTGTACCACTTCGGATGCTCAAGCAAGTCAAA	83mer	
A-3	CAAGCAAGTCAAAGTCTTGCTACTGCAAGAACATCAANTTGGCTCGGAAGCGTCACTGCATGCGCTTATGAGAACTCCAAATCT	83mer	
A-4	TCCAGTGTGTAAACCTTGATACTTTGAGCAATTGGCTGGCAAGTTTCATCAAAGCGGAGTCCAGAGTCTTGTTAGATTGGAGTT	83mer	
A-5	TGTCTTCTTATCGGATTTCTCAGGAGCGCGAAGGTAGTTACTTTCATTAAGGTAGATGTTCTTCATGTCTCCAGTGTGTAAA	83mer	
A-6	GGATCCCATAGTTTTCTCTCATAGTAGTAGTAGGCGTCTCATTTGCCATCAACGGTTGTGAAACAACTGTCTTCTTTATCG	83mer	
B-1	GGATCCACTTGAAATTGATGCGATCTCAATGCTGCGCATGGGCGCTCGTCTTCTTCTGGTTCGCACTCTTACCGCGCA	80mer	
B-2	CCTTACCGCGCGCAACTATCTTGAACTTCTCAAACCGGTATTCGGCAAGAACATTAAGCAAAATTCGTTAAGAAAGTCTC	80mer	
B-3	GTTAAGAAAGTCTCTTATCTACCCAGCGTTTACAAAGACTACAACGAGAGAACTTTCTATCTTTGGAAACGTTTGGCCATT	80mer	
B-4	AGAGTGAGAGAAATAGTCAGATGACAAAGATAAGAACTACGAGTCTTTGCCCTCGAGTTGTAAAGTTGAATGGCAACGT	80mer	
B-5	AATGCCATTGATCTTCTCCATCTAGTCTATTCGTAAGGATGTGGCAACTTGTATGTATGTCGGAAGAGAGTGTAGAGAAAT	80mer	
B-6	TCCGGATACCGAAAAGGTACACCCAGGGGAAAAGAGCGGATTGCCATCAAGTCAGCACGGCGTGAACGAATGCCATTGAT	80mer	
C-1	TCCGGAAACAACCCCTTCATCCCAATCACCGGATTGAGCTTTTAGTACTTTCAACTTTTACCACAAATGGTCAGCATACGTCTGC	83mer	
C-2	GCATACGTCTGCTTCATGTTAGCCGTCGTCCATTCAATCGTTATGACCGCTTCAGGAGTTAAACGAGGAGTATTCAGTCTCT	83mer	
C-3	TATTCAGTCTCTTGTAGGAAATTTCTACTTCAGATGGGAAATAGTAGCCACAATTTCTTATGTCCATCATCATTTCCAGTCC	83mer	
C-4	ATAACATGATGTTTCATGGCTTTGTGAATAAGTAAGAGATTTTCATAACCTCGGTTCTCTGAAGACCTTCTCGGACTGGAAAAT	83mer	
C-5	GAGGATGCCAGCCATGGACCATCCAGCCCATCCATCCTAGTGTGTGGCAATGGTAATACATAGCTATGATAAACATGATGT	83mer	
C-6	GTCGACAAAGTGGCGGTCTTAAAGACCTCCGTTTCATGATGATACGTACAAATTCGGCGAGAACCTGTGCAAGCAGGATGCCAGC	83mer	

FIG. 6A



6/19

D-1	GTCGACCACAGATGATTCTAACGTTATCAAGATCTCTGTCAAGAAGCCCTAAGTTCTTCAAGTATCAAGTGGGAGCATTTGCC	82mer
D-2	GGAGCATTTGCCATAATGACTTCTTTTACCACAAATCAGCCTGGTTCTACAGTTTCAATCTCATCCCTTCACAGTCCCTAT	82mer
D-3	TTACAGTCCCTATCAGAAAGGCACAGAGATCCTAACACCCAGATCACTAACTATGTACGTCAAAGCTAACAGGGCATTA	82mer
D-4	CCTCTAAGAAAATCTTGCAATCAACGGTATGGTTTGGAGCGCTTAGAATCTTGTGTAAGAGTACTCTCTCGTAATGCCCTTGT	82mer
D-5	GGCCCGCAGCTACTCCCTACTAGATTGTCTTAAGTTTGGCAATGTGAGGGACAGTTACGCCATATGGTCCCTCTAAGAAAAT	82mer
D-6	CTGCAGTTGATCAGTGCTAGGCAATCTAAGGCATTTCTACGAAATGGGGTAGATGGCTGCCACGCCGAGGCCCGCAGCTACT	82mer

E-1	CTGCAGCACAGTTCTACTGGATCGTCAACGACCTTAGTCACCTTAAGTGGTTGAAACGAGCTACAATGGCTTAA	77mer
E-2	ACAATGGCTTAAGGAGAAAATCTTGTGAAGTCTCTGTCACTACCTGGTCACTAGTGGAGGATACAAACTCAGATG	77mer
E-3	CAAACTCAGATGATCCACTAAGGGTTTCGATGACAAGGAAGATCTGAAATCACCGTAGAATGCCCTTAACAAGAGG	77mer
E-4	GTGATGTTGTTGTTCTCGAGTTCTGACAAATTTGATCTCTGATCTCCTAGCTCTTTGAGGTCTGGCCTCTTTGTTAAG	77mer
E-5	CGATACCTTGTAACACTGCATTCTTAAAGTCGTCAATTGAAAGTCGCTGGTCCGCATGAGTAGAAAGTATGTTGTTG	77mer
E-6	AAGCTTGAGCTCTTACCAAGTAAAACTCTCCTCCTCTAGTTGACATCTATCTTCAGACTAGATCGATACCTTTGTA	77mer

FIG. 6B

FIG. 7A
FIG. 7B
FIG. 7C

FIG. 7

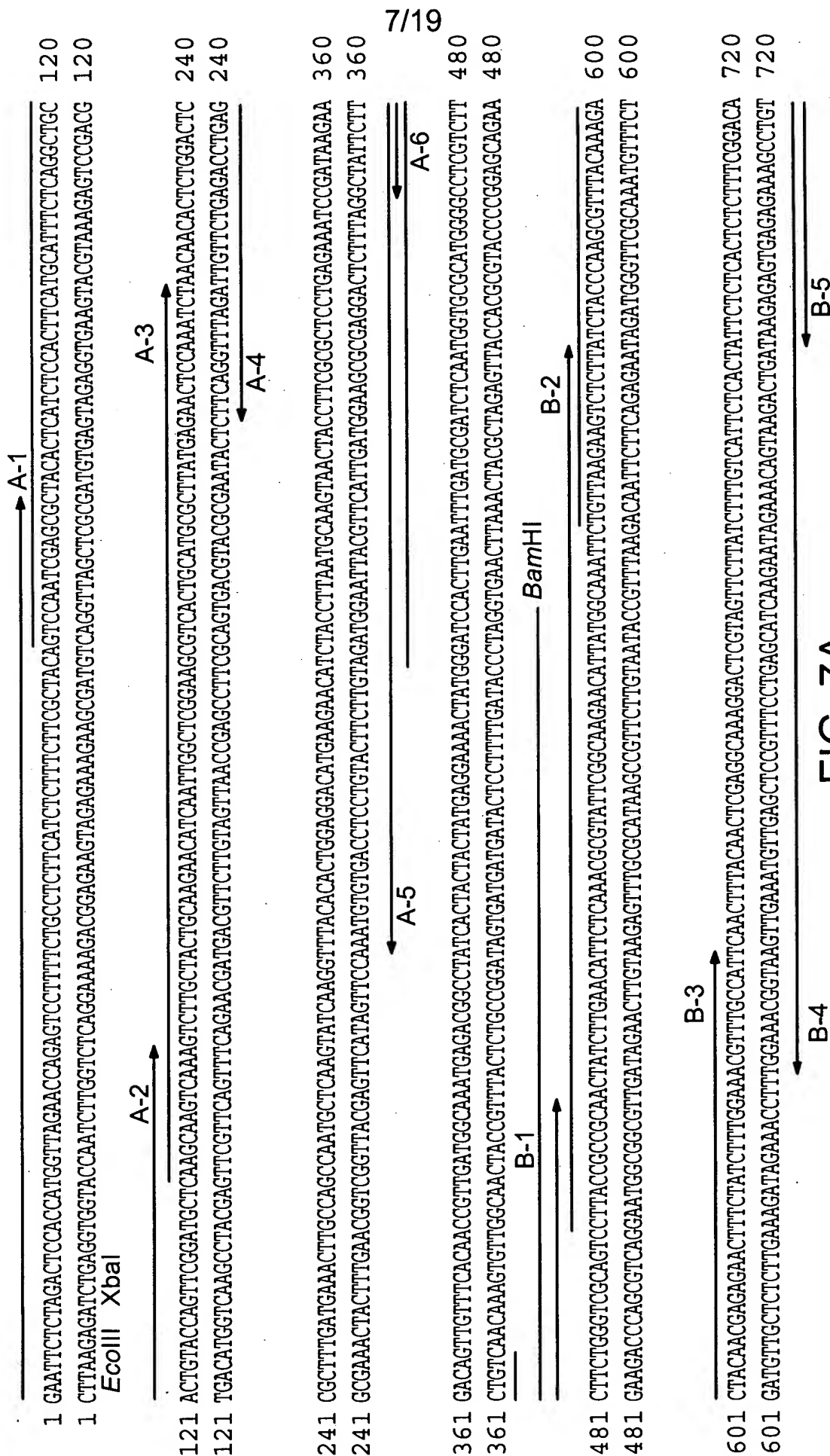


FIG. 7A

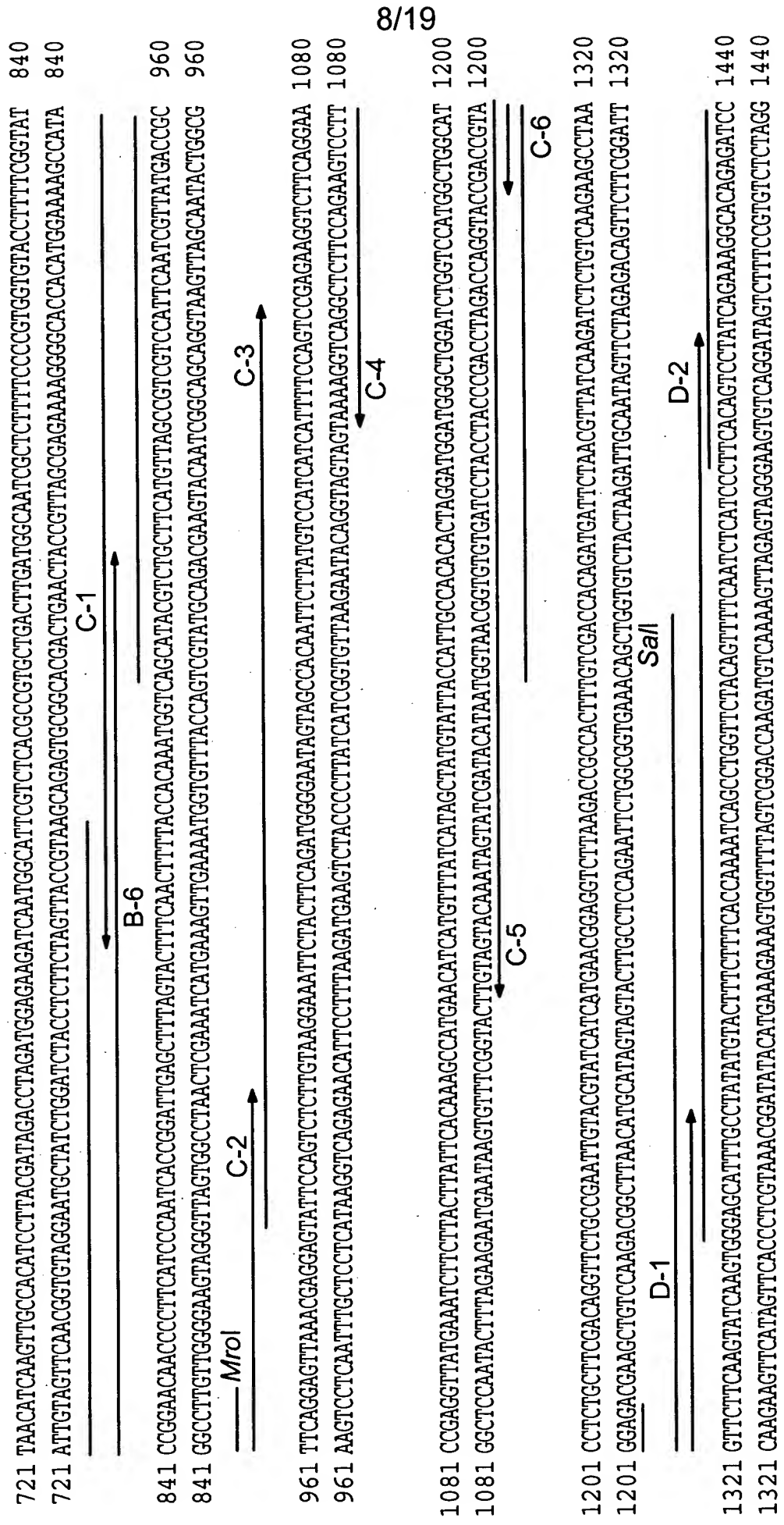


FIG. 7B

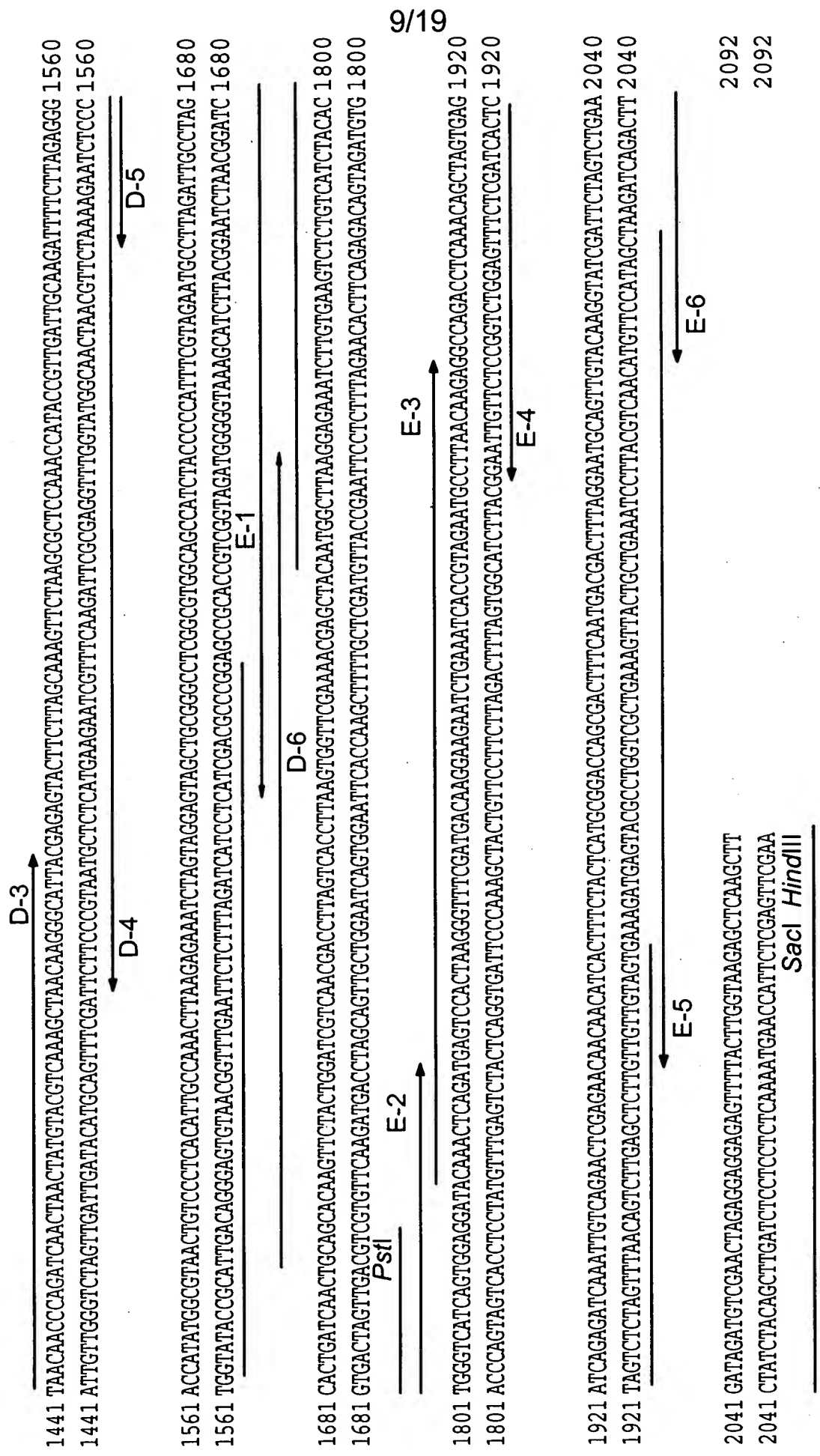
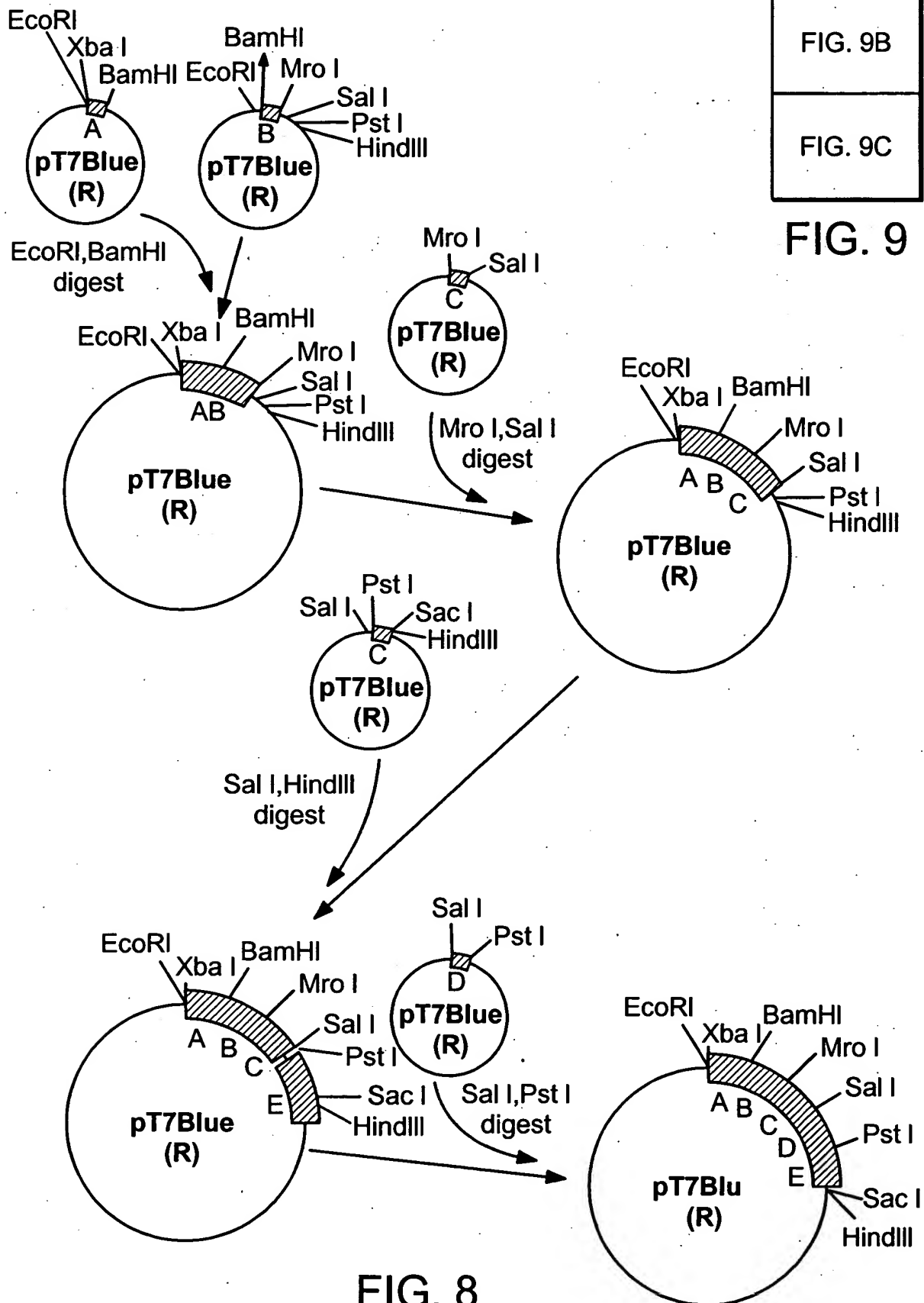


FIG. 7C

FIG. 9A
FIG. 9B
FIG. 9C

FIG. 9



1 gaattctctagactccacc 19

20 ATGGTTAGAACGAGTCCTTTTCTGCCCTCTTTCATCTCTTTCTTCGCTACAGTCCAATCGAGCGGTACACTCATCTCCACTTCATGCATT 109

1 M V R T R V L F C L F I S F F A T V Q S S A T L I S T S C I 30

110 TCTCAGGCTGCACTGTACCAGTTCCGATGCTCAAGCAAGTCAAAGTCTTGCTACTGCAAGAACATCAATTGGCTCGGAAGCGTCACGTGCA 109

31 S Q A A L Y Q F G C S S K S K S C Y C K N I N W L G S V T A 60

200 TCGGCTTATGAGAACTCCAAATCTAAAGACTCTGGACTCCGGTTTGATGAAACTTGCCAGCCAATGCTCAAGTATCAAGGTTTACACA 289

61 C A Y E N S K S N K T L D S A L M K L A S Q C S S I K Y Y T 90

290 CTGGAGGACATGAAGAACATCTACCTTAATGCAAGTAACTACCTTCGCGCTCCTGAGAAATCCGATAAGAACAGACAGTTGTTTCACAACCG 379

91 L E D M K N I Y L N A S N Y L R A P E K S D K K T V V S Q P 120

380 TTGATGGCAAATGAGACGGCCTATCACTACTACTATGAGGAAAACCTATGGGATCCACTTGAATTTGATGCGATCTCAATGTCGCGCATGG 469

121 L M A N E T A Y H Y Y E E N Y G I H L N L M R S Q M C A W 150

470 GGCCTCGTCTTCTTCTGGTGCAGTCCTTACCGCCGCAACTATCTTGAACATTCTCAAACGGGTATTCGGCAAGAACATTATGGCAAAT 559

151 G L V F F W V A V L T A A T I L N I L K R V F G K N I M A N 180

560 TCTGTTAAGAAGTCTTATCTACCCAAGCGTTTACAAAGACTACAACGAGAGAACTTTCTATCTTTTGAAACGTTTGCCATTCAACTTT 649

181 S V K K S L I Y P S V Y K O Y N E R T F Y L N K R L P F N F 210

FIG. 9A

739
210
650 ACAAACGAGGCAAGGACTCGTAGTTCTTTATCTTTGTGCTGACTATCTCTCACTCTCTTCGGACATAACATCAAGTTGCCACAT
211 T T R G K G L V V L I F V I L T I L S L S F G H N I K L P H
740 CCTTACGATAGACCTAGATGGAGAAGATCAATGGCATTCGTCACGCCGTGCTGACTTGATGGCAATCGCTCTTTTCCCCCGTGGTGATC
241 P Y D R P R W R R S M A F V S R R A D L M A I A L F P V Y
830 CTTTTCGGTATCCGGAAACAACCCCTTCATCCCAATCACCGGATTGAGCTTTAGTACTTTCAACTTTTACCACAAATGGTCAGCATACGTC
271 L F G I R N N P F I P I T G L S F S T F N F Y H K W S A Y V
920 TGCTTCATGTTAGCCGTCGTCATCAATCGTTATGACCGCTTCAGGAGTTAAACGAGGAGTATTCAGTCTCTTGTAAAGGAAATTTCTAC
301 C F M L A V V H S I V M T A S G V K R G V F G S L V R K F Y
12/19
1010 TTCAGATGGGGAATAGTAGCCACAATTCTTATGTCCATCATCATTTTCCAGTCCGAGAAGGTCTTCAGGAACCGAGGTTATGAAATCTTC
331 F R W G I V A T I L M S I I I F Q S E K V F R N R G Y E I F
1100 TTACTTATTCACAAAGCCATGAACATCATGTTTATCATAGCTATGTATTACCATTTGCCACACACTAGGATGGGCTGGATCTGGTCC
361 L L I H K A M N I M F I I A M Y Y H C H T L G W M G W I W S
1190 ATGGCTGGCATCCTCTGCTCGACAGGTTCTGCCGAATTGTACGTATCATGAACGGAGGTCTTAAGACCGCCACTTTGTGACACACA
391 M A G I L C F D R F C R I V R I I M N G G L K T A T L S T T
1280 GATGATTCTAACGTATCAAGATCTCTGTCAAGAAGCCCTAAGTTCTTCAAGTATCAAGTGGGAGCATTTGCCCTATATGTACTTTCTTTCA
421 D D S N V I K I S V K K P K F F K Y Q V G A F A Y M Y F L S
1370 CCAAATCAGCCTGTTCTACAGTTTTCATCTCATCCCTTCACAGTCCCTATCAGAAAGGCACAGAGATCCTAACACCCAGATCAACTA
451 P K S A W F Y S F Q S H P F T V L S E R N R D P N N P D Q L

FIG. 9B

1460 ACTATGTCAGTCAAGCTAACAGGGCATTACGAGAGTACTTCTTAGCAAGTTCTAAGCGCTCCAACCATACCGTTGATTGCCAAGATT 1549
481 T M Y Y K A N K G I T R V L L S K Y L S A P N H T V D C K I 510
1550 TTCTTAGAGGACCATATGGCGTAACTGTCCCTCACATTGCCAAACTTAAGAGAAATCTAGTAGGAGTAGCTGGGGCCCTCGGCGTGGCA 1639
571 F L E G P Y G V T V P H I A K L K R N L V G V A A G L G V A 570
1640 GCCATCTACCCCATTTCTGTAGAAATGCCTTAGATTGCCCTAGCACTGATCAACTGCAGCACAAAGTTCTACTGGATCGTCAACGACCTTAGT 1729
541 A I Y P H F V E C L R L P S T D Q L Q H K F Y W I V N D L S 570
1730 CACCTTAAGTGGTTTCGAAAACGAGCTACAATGGCTTAAGGAGAAATCTTGTAAGTCTCTGTCACTACACTGGGTCAATCAGTGGAGGAT 1819
571 H L K W F E N E L Q W L K E K S C E V S V I Y T G S S V E D 600
1820 ACAAACTCAGATGAGTCCACTAAGGGTTTCGATGACAAGGAAGAAATCTGAAATCACCGTAGAATGCCTTAAACAAGAGGCCAGACCTCAAA 1909
601 T N S D E S T K G F D D K E E S E I T V E C L N K R P D L K 630
1910 GAGCTAGTGAGATCAGAGATCAAAATTGTCAGAACTCGAGAACAAACAACATCACTTTCTACTCATGCGGACCAGCGACTTTCATGACGAC 1999
631 E L V R S E I K L S E L E N N N I T F Y S C G P A T F N D D 660
2000 TTTAGGAATGCAGTTGTACAAGGTATCGATTCTAGTCTGAAGATAGATGTGGAACCTAGAGGAGGAGAGTTTACTTGATAA 2089
661 F R N A V V Q G I D S S L K I D V E L E E S F T W * 687
2090 ctt

FIG. 9C



14/19

FRE1

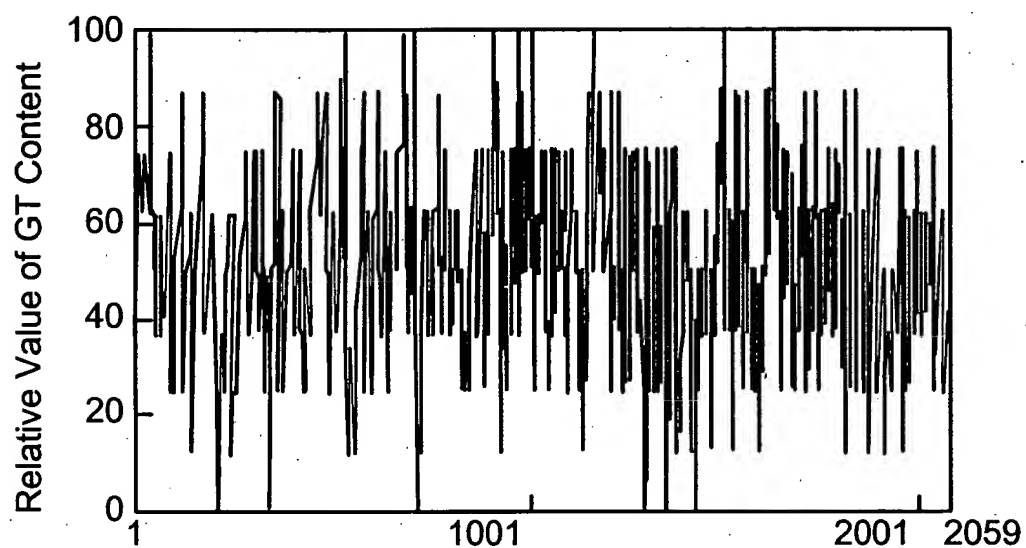


FIG. 10A

refre1

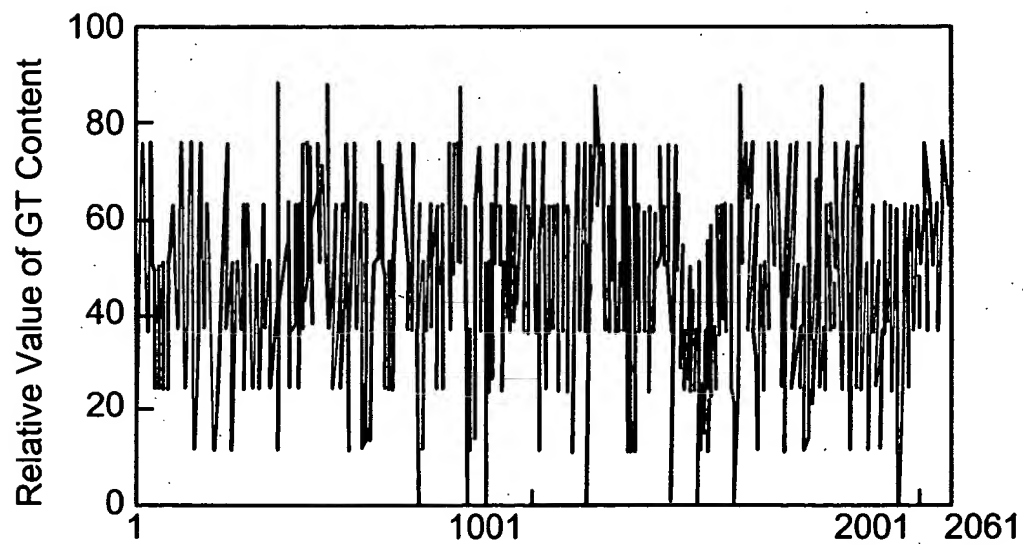


FIG. 10B



15/19

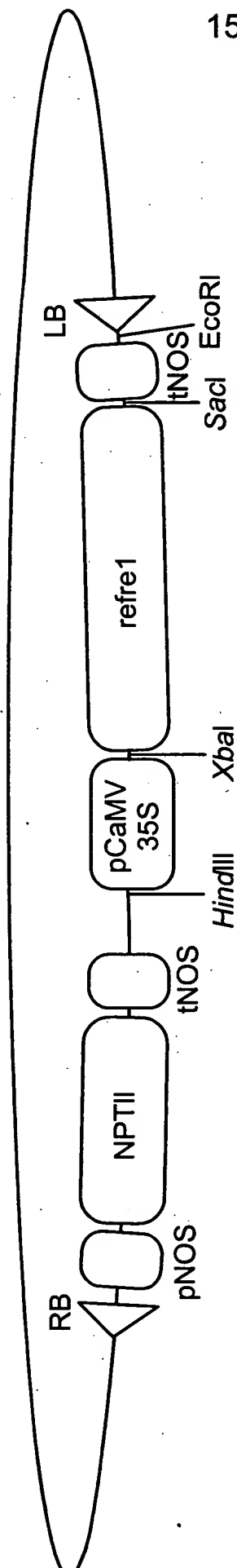


FIG. 11



16/19

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FIG. 13

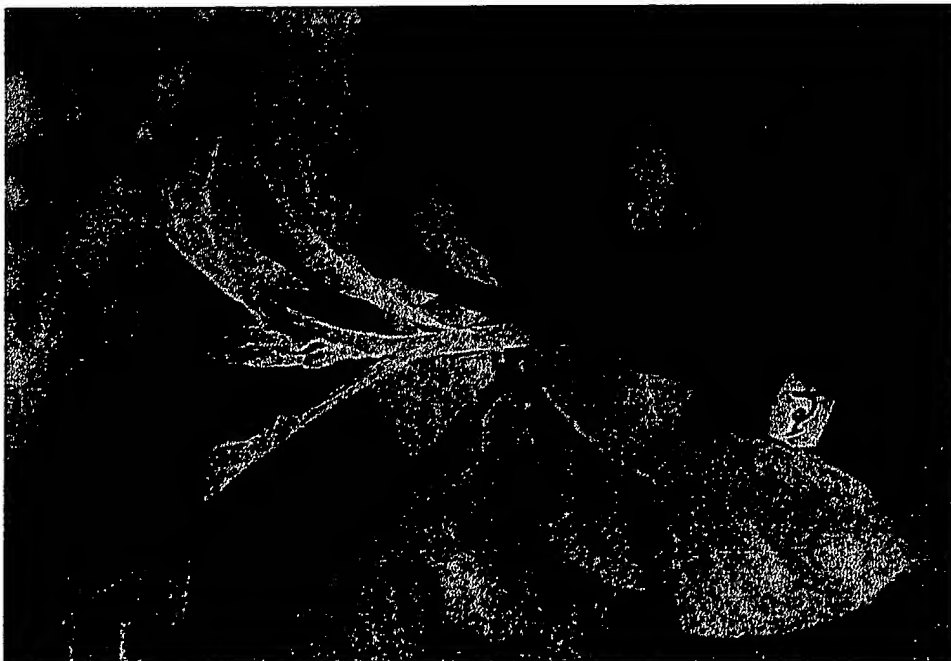


FIG. 12

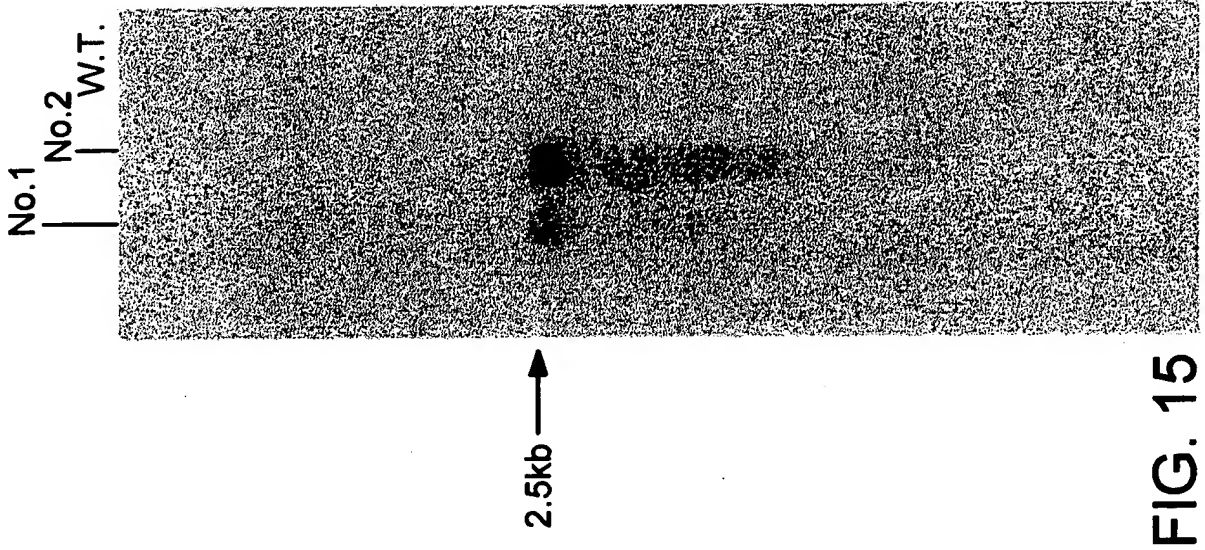


FIG. 15

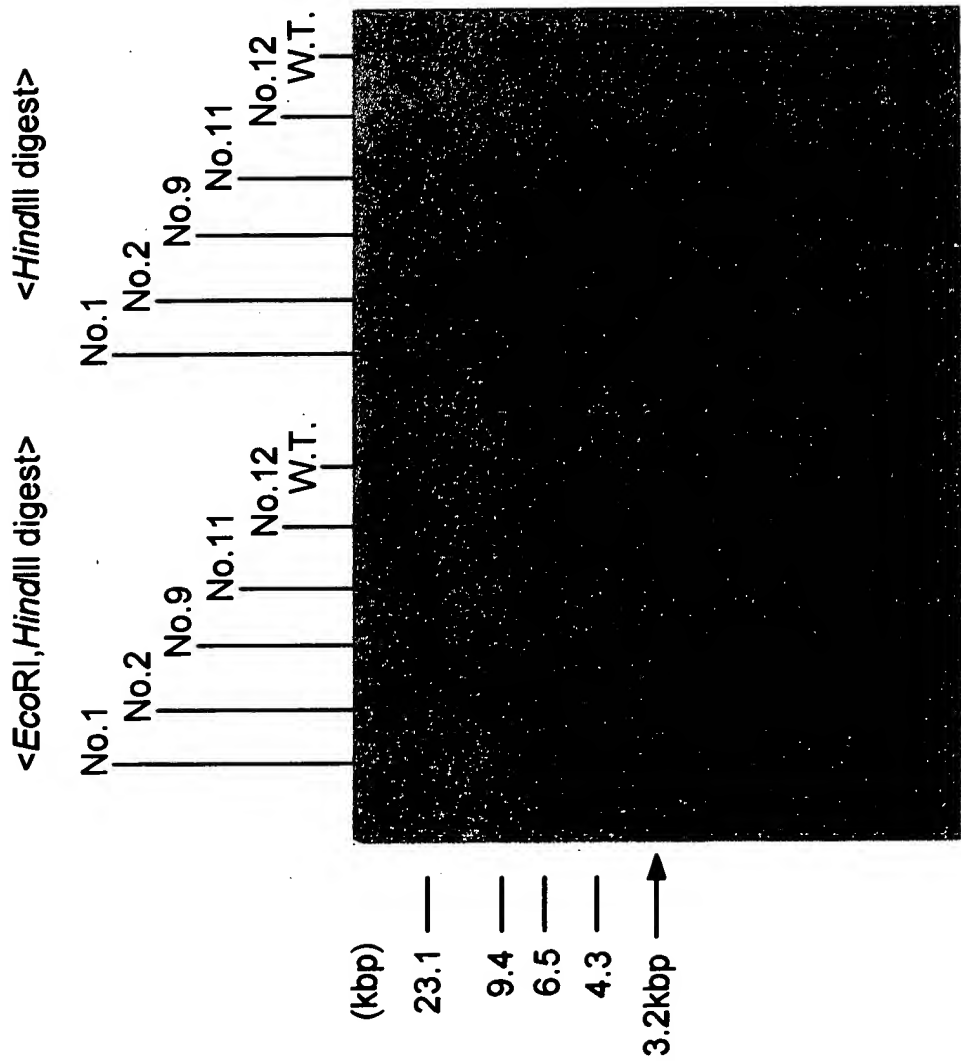


FIG. 14



18/19

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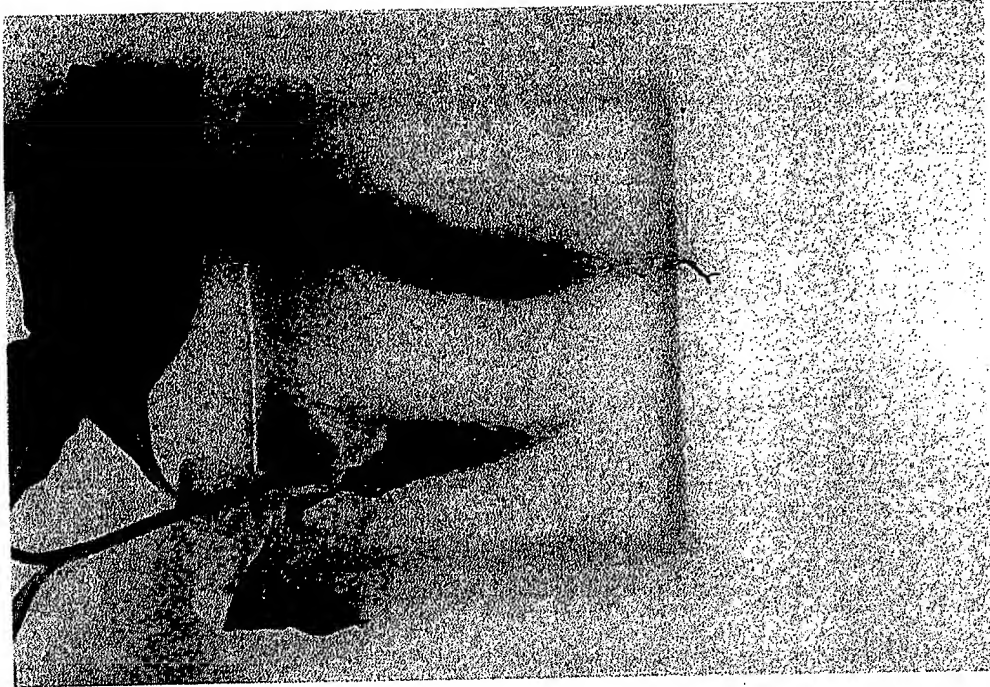


FIG. 17

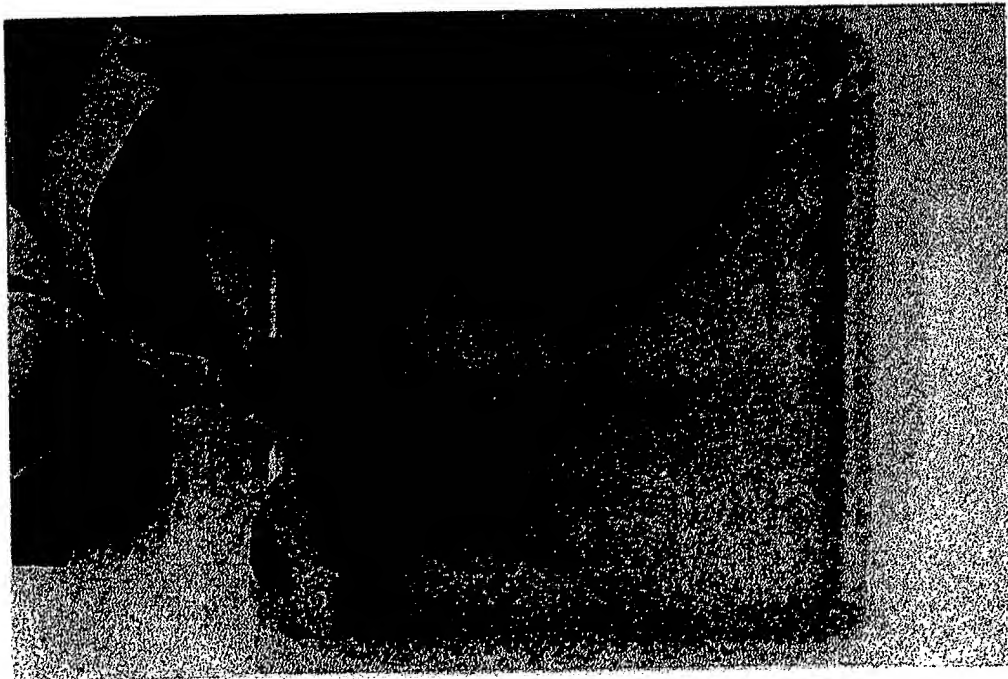
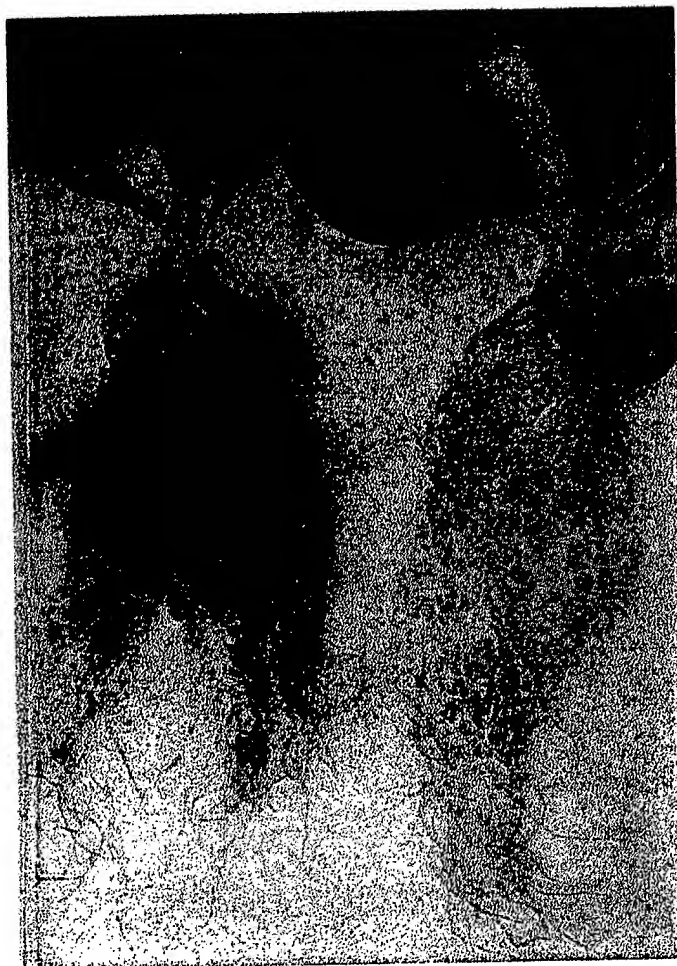


FIG. 16



19/19

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T₂ Plants

FIG. 18